

**Amendment to the Claims:**

1. (Currently Amended) Method for magnetic resonance imaging of at least a portion of a body placed in a stationary and substantially homogeneous main magnetic field, the method comprising ~~the following steps:~~

a) ~~—~~subjecting said portion to a T2-preparation sequence which enhances contrast between tissues with different transverse relaxation times;

subjecting said portion to a 2D navigator restore sequence which selectively transforms transverse magnetization into longitudinal magnetization within an imaging volume and compensates for magnetic signals generated by the T2-preparation sequence;

b) ~~—~~ further subsequent to subjecting said portion to the 2D navigator restore sequence and T2-preparation sequence, [[to]] subjecting said portion to a 2D navigator sequence;

e) ~~—~~measuring a MR navigator signal;

d) ~~—~~generating a series of MR imaging signals by subjecting said portion to an imaging sequence; and

e) ~~—~~measuring said MR imaging signals for reconstructing an MR image of said portion from said signals;

~~wherein prior to subjecting said portion to said 2D navigator sequence in step b), said portion is further subjected to a 2D navigator restore sequence.~~

2. (Currently Amended) Method of claim 1, wherein said T2-preparation sequence comprises at least first and second ~~[[two]]~~ RF pulses ( $\alpha$ X), which are separated by a relaxation period, for enhancing the contrast between tissues with different transverse relaxation times.

3. (Currently Amended) Method of claim ~~[[1]]~~ 2, wherein said 2D navigator sequence comprises at least one shaped RF pulse and at least one gradient pulse being switched during irradiation of said shaped RF pulse in order to excite nuclear magnetization within a spatially restricted navigator volume.

4. (Currently Amended) Method according to claim [[2]] 3, wherein said 2D navigator restore sequence includes at least first and second RF restore pulses and further including:

applying the first navigator RF restore pulse immediately subsequent to applying the first T2 pulse;

applying the second navigator RF restore pulse immediately preceding to applying the second T2 pulse; and

is applied during said relaxation period in order to selectively transform transforming transverse magnetization within said navigator volume into longitudinal magnetization during the T2-preparation sequence relaxation period.

5. (Previously Presented) Method of claim 2, wherein said T2-preparation sequence further comprises an even number of substantially 180° RF pulses.

6. (Previously Presented) Method of claim 1, wherein said MR navigator signal is employed for gating of said imaging sequence and/or for adjusting the parameters of said imaging sequence and/or for correction of said MR image.

7. (Previously Presented) Method of claim 1, wherein said imaging sequence is a turbo field echo sequence.

8. (Previously Presented) Device for magnetic resonance imaging of a body placed in a stationary and substantially homogeneous main magnetic field, the device comprising means for establishing said main magnetic field, means for generating magnetic field gradients superimposed upon said main magnetic field, means for radiating RF pulses towards said body, control means for controlling the generation of said magnetic field gradients and said RF pulses, means for receiving and sampling magnetic resonance signals generated by sequences of RF pulses and switched magnetic field gradients, and reconstruction means for forming an image from said signal samples, wherein said control means comprises a programming with a description of an imaging procedure according to the method of **claim 1**.

9. (Currently Amended) Device of claim 8, ~~wherein it comprises~~  
further including:

ECG-means for registering ECG-data from said body, said ECG-data  
being processed by said control means for gating said imaging procedure.

10. (Currently Amended) A computer readable medium ~~containing~~  
including instructions for controlling a computer system to:

a)———subject a portion of an object to be examined to a T2-  
preparation sequence which enhances contrast between tissues with different  
transverse relaxation times;

simultaneously with subjecting said portion of the object to the T2-  
preparation sequence, interleavingly subject said portion of the object to a 2D  
navigator restore sequence which selectively transforms transverse magnetization into  
longitudinal magnetization within an imaging volume and compensates for magnetic  
signals generated by the T2-preparation sequence;

b)———further subsequently to subjecting said portion of the object to  
the T2-preparation sequence and 2D navigator restore sequence, subject said portion  
to a 2D navigator sequence;

e)———measure a MR navigator signal;

d)———generate a series of MR imaging signals by subjecting said  
portion to an imaging sequence;

e)———measure said MR imaging signals for reconstructing an MR  
image of said portion from said signals;

~~wherein the computer program further has instructions to prior to~~  
~~subjecting said portion to said 2D navigator sequence in step b), subject said portion~~  
~~is further to a 2D navigator restore sequence.~~

11. (New) A method comprising:

applying at least first and second T2 weighted sequence RF pulses  
which first and second T2 pulses are separated by a relaxation period;

immediately after application of the first T2 pulse, applying a first 2D navigator restore sequence RF pulse;

selectively transforming transverse magnetization generated by the T2 sequence within a navigator volume into longitudinal magnetization with the first 2D navigator restore sequence RF pulse;

applying a second 2D navigator restore pulse immediately preceding to applying the second T2 pulse; and

transforming the longitudinal magnetization into transverse magnetization with the second 2D navigator restore pulse.

12. (New) The method of claim 11, further including:

applying a 2D navigator sequence;

measuring a MR navigator signal;

generating a series of MR imaging signals; and

reconstructing an MR image of the navigator volume from the MR signals.

13. (New) The method of claim 12, wherein the navigator volume is pencil shaped.

14. (New) The method of claim 13, wherein the navigator image is a one dimensional image.

15. (New) The method of claim 14, wherein the navigator image is used to gate diagnostic imaging of a volume different from the navigator volume.